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SPECIAL AIRWORTHINESS INFORMATION BULLETIN

Aircraft Certification Service
Washington, DC

<http://www.faa.gov/aircraft/safety/alerts/SAIB>

This is information only. Recommendations aren't mandatory.

Introduction

The purpose of this Special Airworthiness Information Bulletin (SAIB) is to advise owners, operators, and repair stations of aircraft equipped with the Rolls-Royce Corporation (formerly Allison Engine Company) model 250-C30, -C40 and -C47 series engines, that a recent Suspected Unapproved Parts (SUP) investigation revealed that some combustion liners may have been modified with an unapproved metal alloy. These engines are installed in, but not limited to Bell Helicopter models 206, 230, 407, and 430; MD Helicopter models 369F, 369FF, and 600; and Sikorsky model S76A helicopters.

Background

Information obtained from a Suspected Unapproved Parts Investigation revealed that some combustion liner mixing cups were overhauled with an alloy (Hastelloy X) not approved for this application at Aero Weld, Inc., San Marcos, CA. These liners were overhauled from September 2000 thru November 2005. The liner part numbers are: 23066675, E23066675, 23064570, and E23064570. Approximately 235 liners reached the field.

This alloy is not approved and does not have the corrosion resistance of the approved material (L605). While this material does not have the corrosion resistance of the approved material, there is at least one example of a Hastelloy X equipped liner that reached its scheduled time change interval with

satisfactory field service. The expected failure mode is a degradation of the cup, affecting the performance of the mixing assembly and resulting in a gradual loss of combustor efficiency. The operator will notice increasing fuel flow and increasing turbine temperatures if the cup deteriorates.

Recommendation

Engines in the field with Hastelloy X mixing cups may continue until the next scheduled maintenance event provided the operating temperatures and power output remain within normally acceptable values.

At the next scheduled maintenance event (when the combustion section is accessed for inspection/maintenance), replace the Hastelloy X mixing cup equipped liners with L605 equipped liners. This will require removal of the combustion chamber and replacing the affected subassembly (liner).

For Further Information Contact

John Tallarovic, Aerospace Engineer, FAA,
Chicago Aircraft Certification Office,
Propulsion Branch, ACE-118C; 2300 East
Devon Avenue, Des Plaines, IL 60018;
telephone: 847-294-8180; facsimile: 847-294-
7834, email: john.m.tallarovic@faa.gov

Gary Glenn, Aviation Safety Inspector, San
Diego Flight Standards, 8525 Gibbs Drive,
Suite 120, San Diego, CA 92123; phone:
619-557-5281, x287; email:
gary.w.glenn@faa.gov